

CLAIMS

~~1. Cells for the production of helper dependent~~
adenoviral vectors, including at least the following
genic units:

- a first genic unit comprising an adenovirus defective genome having the inverted terminal repeats in head-to-tail configuration, the encapsidation signal inactivated, and at least one of the non-structural regions inactivated;

- a second genic units comprising at least one inducible promoter and at least one of the regions inactivated in the first genic unit, said regions being under the control of said inducible promoter;

whereby following the activation of the inducible promoter of the second genic unit and the infection of the cells with said helper dependent adenoviral vectors, the first genic unit and the second genic unit enable the production of said helper dependent defective adenoviral in said cells in absence of helper.

2. Cells according to claim 1, wherein the first genic unit is integrated in the genome of the cells and has at both the extremities Inverted terminal Repeats in head-to-tail configuration.

3. Cells according to claim 1, wherein the first genic unit is included in an episomal unit including an element enabling the replication of said episomal unit in a low number of copies.

4. Cells according to claim 3, wherein said element enabling the replication of said episomal unit is the origin of replication of a virus.

~~5. Cells according to claim 4, wherein the gene coding for the activating factor of said origin of replication is further included in the episomal unit.~~

6. Cells according to claim 4, wherein the gene coding for the activating factor of said origin of replication is integrated in the genome.

~~7. Cells according to any of claim 4 to 6, wherein~~

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said virus is Epstein-Barr virus, the origin of replication is OriP and the activating factor is EBNA-1.

8. Cells according to any of claims from 1 to 7, wherein the encapsidation signal of the adenovirus defective genome of the first unit is inactivated by total or partial deletion.

9. Cells according to any of claims from 1 to 8, wherein the non-structural regions of the adenovirus defective genome of the first unit is inactivated by total or partial deletion.

10. Cells according to any of claim 1 to 9, wherein the inactivated regions of the first unit are selected from the group consisting of E1, E2 and E4.

11. Cells according to claim 10, wherein said regions are E1 and E4.

12. Cells according to claim 10, wherein said regions are E1, E4 and E2A.

13. Cells according to claim 10, wherein said regions are E1, E4 and E2b polymerase.

14. Cells according to claim 10, wherein said regions are E1, E4 and E2b preterminal protein (PTP).

15. Cells according to any one of claims 1 to 14 wherein the viral regions of the first genic unit is operatively linked to at least one regulatory element enabling the tight control of the expression of said regions.

16. Cells according to any one of claims 1 to 15 wherein the promoter on the second genic unit is the tetracycline operator.

17. Cells according to any one of claims 1 to 16 wherein the viral regions in the second genic unit are operatively linked to elements regulating the expression of said regions.

18. Cells according to any one of claims 1 to 17 wherein the adenovirus defective genome of the first unit is totally or partially constituted by the genome of a human adenovirus.

Sub.B1

FOOTNOTES

Sub.B2
p.20

Sub.B2

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~~19. Cells according to claim 18, wherein said adenovirus defective genome of the first unit is totally or partially constituted by the genome of at least one of the human adenoviruses Ad2 and Ad5.~~

5 ~~20. Cells according to any of claims 1 to 19, wherein the viral regions of the second genic unit, are totally or partially constituted by the viral regions of a human adenovirus.~~

10 ~~21. Cells according to claim 20, wherein said viral regions of the second genic unit, are totally or partially constituted by the viral regions of at least one of the human adenoviruses Ad2 and Ad5.~~

15 ~~22. Cells for the production of helper dependent adenoviral vectors including the first genic unit as defined in any of the claims 1 to 21.~~

~~23. Cells for the production of helper dependent adenoviral vectors, including the second genic unit as defined in any of the claims 1 to 21.~~

20 ~~24. The cells according to any of claims 1 to 23, wherein said cells are mammalian cells.~~

~~25. The cells according to claim 24, wherein said mammalian cells are human cells.~~

25 ~~26. Compositions comprising helper dependent adenoviral vectors and a vehicle or a carrier, characterised in that said composition is free of contaminating helper viruses.~~

~~27. Use of the cells according to anyone of the claims from 1 to 25, for the production of helper dependent adenoviral vectors including at least a gene of interest.~~

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